

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/643,752	LIU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	STEPHANIE K. MUMMERT	1637	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/10/08.
2. ☒ The allowed claim(s) is/are 24,26-32,35-37,39-43,46-48 and 104-116.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>3/10/08</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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### **DETAILED ACTION**

Applicant's amendment filed on March 10, 2008 is acknowledged and has been entered. Claims 24, 35, 37, 46-47, 105, 106 have been amended. Claims 1-23, 25, 33-34, 38, 44-45, 49-103 have been canceled. Claims 107-116 have been added. Claims 24, 26-32, 35-37, 39-43, 46-48, 104-116 are pending.

Claims 24, 26-32, 35-37, 39-43, 46-48, 104-116 are discussed in this Office action.

### ***Terminal Disclaimer***

The terminal disclaimer filed on March 10, 2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 7,070,928; US Patent 7,223,545 and US Patent application 10/643752 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The rejections of claims under obviousness-type double patenting are withdrawn in view of the terminal disclaimer filed by Applicant discussed above.

Furthermore, Applicant's remarks that the 11/586851 copending application has gone abandoned are acknowledged (p. 11 of remarks) and the rejection over that application is also withdrawn.

***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on March 10, 2008 was filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claims 24, 26-32, 35-37, 39-43, 46-48, 104-116 are allowed.

**REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

The claims of the instant invention are drawn to an in vitro method for increasing reaction selectivity among a plurality of reactants in a nucleic acid templated synthesis reaction, a method which yields a reaction product that is not a nucleic acid. The closest prior art, Sergeev (WO00/61775; October 2000) teaches a method of nucleic acid templated synthesis that produces a reaction product that is not nucleic acid. However, while Sergeev teaches a method that is very similar in design and function to the method as claimed, Sergeev does not teach or suggest that the second and third reactive units are capable of reacting independently with the first reactive unit. Furthermore, in the various embodiments claimed, the third reactive unit has an oligonucleotide attached, but the attached oligonucleotide does not comprise an anti-codon sequence and so does not anneal to the template and is therefore able to independently react with either the first reactive unit or with the second reactive unit.

The format of Sergeev, which teaches oligonucleotides with associated reactive units that hybridize sequentially or in adjacent locations along a template to mediate template directed

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synthesis, is not readily modifiable to achieve independent reaction between the first reactive unit and the third reactive unit while also being compatible for reaction between the first reactive unit and the second reactive unit. The method of Sergeev is also not readily compatible with a reaction that does not require hybridization of the oligonucleotide associated with the third reactive unit to the template as claimed. Sergeev also does not teach that the reaction between one pair of reactive units is incompatible with the reaction with another pair of reactive units as required in claims 35, 105 and 106.

There is no other teaching or suggestion in the prior art of a method which comprises reactive units and transfer units in the format claimed, including independent reaction between the first reactive unit and third reactive unit and between the second reactive unit and first reactive unit, further comprising the inclusion of the a third reactive unit with an attached oligonucleotide that does not hybridize to the template and which produces a reaction product that is not nucleic acid. The claims are therefore novel and non-obvious over the prior art and are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHANIE K. MUMMERT whose telephone number is (571)272-8503. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephanie K. Mummert/  
Examiner, Art Unit 1637

SKM

/GARY BENZION/  
Supervisory Patent Examiner, Art Unit 1637